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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,256	04/18/2000	Steven P. Georgis	19930-000200US	1759

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EXAMINER

SMITH, ZANDRA V

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 03/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/551.256

Applicant(s)

GEORGIS ET AL

Examiner

Zandra V. Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-23 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 14 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,6
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: page 9, line 27 describes fig. 1C. It appears that "1C" should be 3C. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-7, 9, and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by *Ford et al.* (5,745,271).

As to **claims 6 and 13**, Ford discloses an attenuation device for wavelength multiplexed optical fiber communications, comprising:

an optical train, including a dispersive element (col. 3, lines 46-56);

a photodetector (col. 5, lines 28-33);

a routing mechanism (col. 4, lines 7-12);

an electric circuit coupled to the photodetector (col. 6, lines 36-55); and

a routing mechanism controller (col. 4, lines 58-63).

As to **claim 7**, Ford discloses everything claimed, as applied above, in addition the wavelength intensity, optical power is determined (col. 6, lines 1-4).

As to **claim 9**, Ford discloses everything claimed, as applied above, in addition the control circuit causes the routing mechanism to select the spectral bands (col. 4, lines 50-62).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Ford et al.* (5,745,271) in view of *Shanton, III* (6,728,535).

As to **claim 8**, Ford discloses everything claimed, as applied above, with the exception SONET frames, however to do so is well known as taught by Shanton. Shanton discloses a SONET JO byte message monitoring system that includes SONET frames in a wavelength division multiplexing system (see abstract and col. 2, lines 18-33). It would have been obvious to one having ordinary skill in the art at the time of invention to include SONET frames to control the transfer and timing of the information signals.

Claims 10-12, 15-16, 18-23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ford et al.* (5,745,271) in view of *Aksyuk et al.* (6,204,946).

As to **claims 10-12, and 15-16**, Ford discloses everything claimed, as applied above, with the exception the routing elements having first and second states and the control circuit sequentially selecting each routing element in a desired subset of routing elements so that the spectral bands are sent to the detectors, however to do so is well known as taught by Aksyuk. Aksyuk discloses a reconfigurable wavelength division multiplex add/drop device using micromirrors what includes mirrors whose orientations may be changed from first to second positions (col. 3, lines 12-38). It would have been obvious to one having ordinary skill in the art

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at the time of invention to include includes mirrors whose orientations may be changed from first to second positions to control the orientation of the reflected wavelength (Aksyuk, col. 3, lines 25-30). As to the photodetector and additional electric circuit, Ford discloses the determination of the wavelength intensity (optical power, col. 6, lines 1-4) using photodetectors. The addition of an additional electrical circuit would have been obvious to one having ordinary skill in the art at the time of invention as a means to obtain simultaneous measurements.

As to **claims 18, 21, 23, and 25-26**, Ford discloses an attenuation device for wavelength multiplexed optical fiber communications, comprising:

- an optical train, including a dispersive element (col. 3, lines 46-56);
- a photodetector (col. 5, lines 28-33);
- a routing mechanism (col. 4, lines 7-12);
- an electric circuit coupled to the photodetector (col. 6, lines 36-55), and
- a routing mechanism controller (col. 4, lines 58-63).

Ford differs from the claimed invention in that the routing elements having first and second states and the control circuit sequentially selecting each routing element in a desired subset of routing elements so that the spectral bands are sent to the detectors are not provided. However to do so is well known as taught by Aksyuk. Aksyuk discloses a reconfigurable wavelength division multiplex add/drop device using micromirrors what includes mirrors whose orientations may be changed from first to second positions (col. 3, lines 12-38). It would have been obvious to one having ordinary skill in the art at the time of invention to include includes mirrors whose orientations may be changed from first to second positions to control the orientation of the reflected wavelength (Aksyuk, col. 3, lines 25-30). As to the photodetector

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and additional electric circuit, Ford discloses the determination of the wavelength intensity (optical power, col. 6, lines 1-4) using photodetectors. The addition of an additional electrical circuit would have been obvious to one having ordinary skill in the art at the time of invention as a means to obtain simultaneous measurements.

As to **claim 19**, the system of Ford and Aksyuk discloses everything claimed, as applied above, in addition wavelength intensity, optical power is determined (col. 6, lines 1-4);

As to **claim 20**, the system of Ford and Aksyuk discloses everything claimed, as applied above, in addition the control circuit causes the routing mechanism to select the spectral bands (col. 4, lines 50-62).

As to **claim 22**, the system of Ford and Aksyuk discloses everything claimed, as applied above, with the exception of an avalanche photodiode, however it would have been obvious to one having ordinary skill in the art at the time of invention to include an avalanche photodiode since it has been held that the selection of a known material on the basis of its suitability for the intended use is within the level of ordinary skill of a worker in the art.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Ford et al.* (5,745,271) in view of *Sheih* (6,240,109).

As to **claim 17**, Ford discloses everything claimed, as applied above, with the exception a coupler to direct a fraction of the light traveling on a fiber to be monitored and a management processor that receives the information based on the signal, however to do so is well known as taught by Sheih. Sheih discloses a system for wavelength stabilization of wavelength division multiplex channels that includes a coupler to direct a fraction of the light traveling on a fiber to be monitored and a management processor that receives the information based on the signal (see

fig. 1). It would have been obvious to one having ordinary skill in the art at the time of invention to include a coupler to direct a fraction of the light traveling on a fiber to be monitored and a management processor that receives the information based on the signal to control frequency drift in the fiber.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Ford et al.* (5,745,271) and *Aksyuk et al.* (6,204,946) as applied above, and further in view of *Sheih* (6,240,109).

As to **claim 27**, the system of Ford and Aksyuk discloses everything claimed, as applied above, with the exception a coupler to direct a fraction of the light traveling on a fiber to be monitored and a management processor that receives the information based on the signal, however to do so is well known as taught by Sheih. Sheih discloses a system for wavelength stabilization of wavelength division multiplex channels that includes a coupler to direct a fraction of the light traveling on a fiber to be monitored and a management processor that receives the information based on the signal (see fig. 1). It would have been obvious to one having ordinary skill in the art at the time of invention to include a coupler to direct a fraction of the light traveling on a fiber to be monitored and a management processor that receives the information based on the signal to control frequency drift in the fiber.

Allowable Subject Matter

Claims 1-5 are allowable over the prior art of record.

Claims 14 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is a statement of reasons for the indication of allowable subject matter: prior art of record fails to provide or fairly suggest, in a wavelength division multiplexing system, separating the spectral bands such that a first spectral band is separated and sent to a photodetector while preventing all other spectral bands from reaching the photodetector and continuing for all other spectral bands and a rooftop prism whose position can be changed to define first and second states.

Fax/Telephone Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zandra V. Smith whose telephone number is (703) 305-7776. The examiner can normally be reached on 7:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (703)308-4881. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0530.



Zandra Smith
Patent Examiner
Art Unit 2877
March 19, 2002